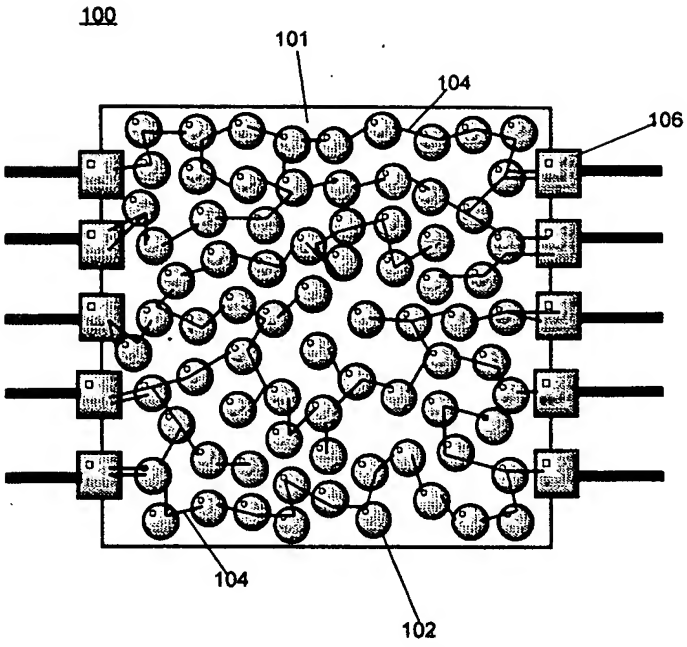


PRIOR ART

FIGURE 1

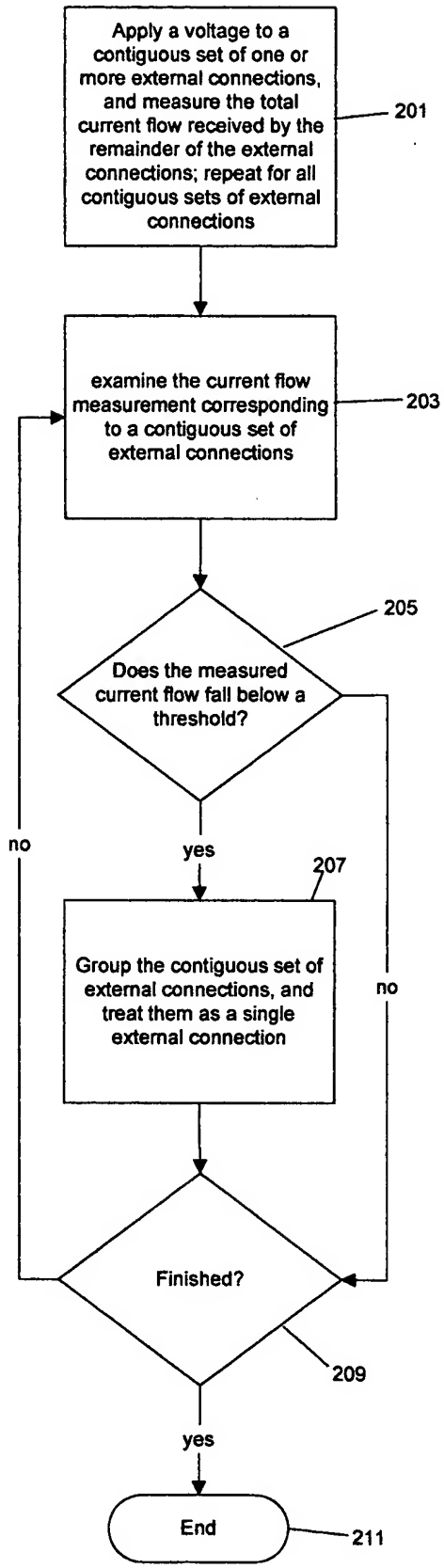
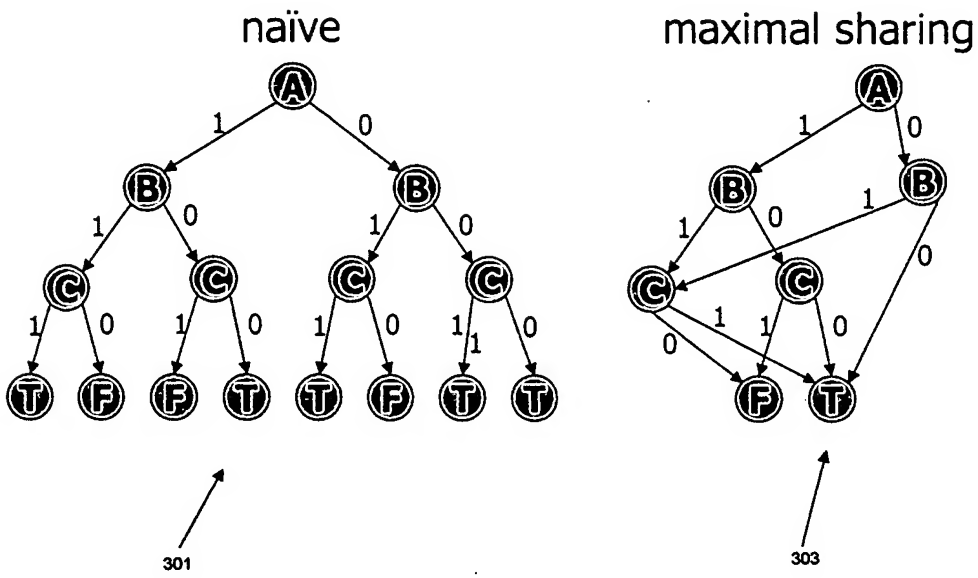

Apply a voltage to a contiguous set of one or more external connections, and measure the total current flow received by the remainder of the external connections; repeat for all contiguous sets of external connections
201
examine the current flow measurement corresponding to a contiguous set of external connections
203
Does the measured current flow fall below a threshold?
205
no
yes
207
Group the contiguous set of external connections, and treat them as a single external connection
no
Finished?
209
yes
End
211

FIGURE 2

Representations of A&B&C or A&-B&C or -A&B&C or -A&-B&C or -A&-B&-C



PRIOR ART

FIGURE 3

Express Mail No. EV 345 925 245 US

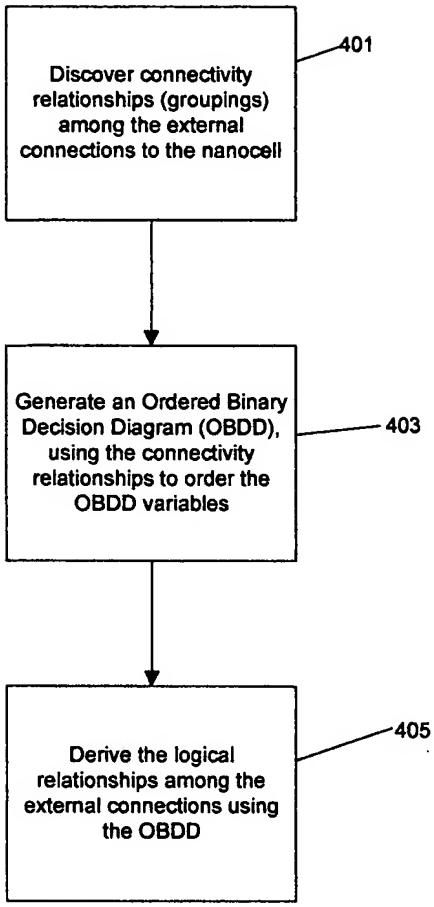

Discover connectivity relationships (groupings) among the external connections to the nanocell
401
Generate an Ordered Binary Decision Diagram (OBDD), using the connectivity relationships to order the OBDD variables
403
Derive the logical relationships among the external connections using the OBDD
405

FIGURE 4

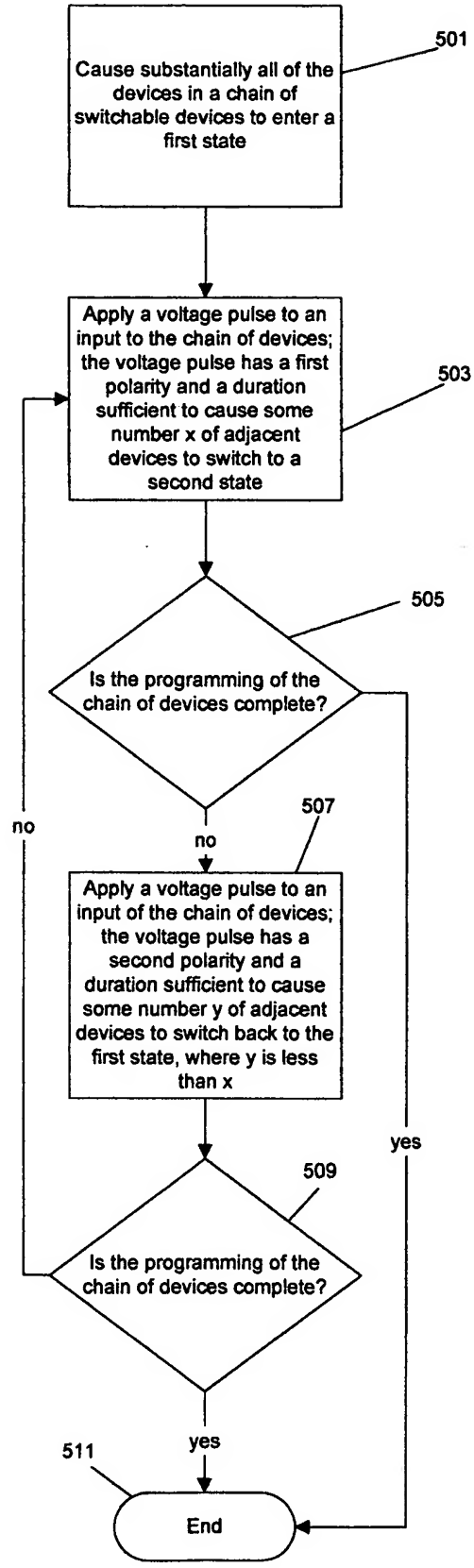

Cause substantially all of the devices in a chain of switchable devices to enter a first state
501
Apply a voltage pulse to an input to the chain of devices; the voltage pulse has a first polarity and a duration sufficient to cause some number x of adjacent devices to switch to a second state
503
Is the programming of the chain of devices complete?
505
no
no
507
Apply a voltage pulse to an input of the chain of devices; the voltage pulse has a second polarity and a duration sufficient to cause some number y of adjacent devices to switch back to the first state, where y is less than x
yes
509
Is the programming of the chain of devices complete?
yes
511
End

FIGURE 5

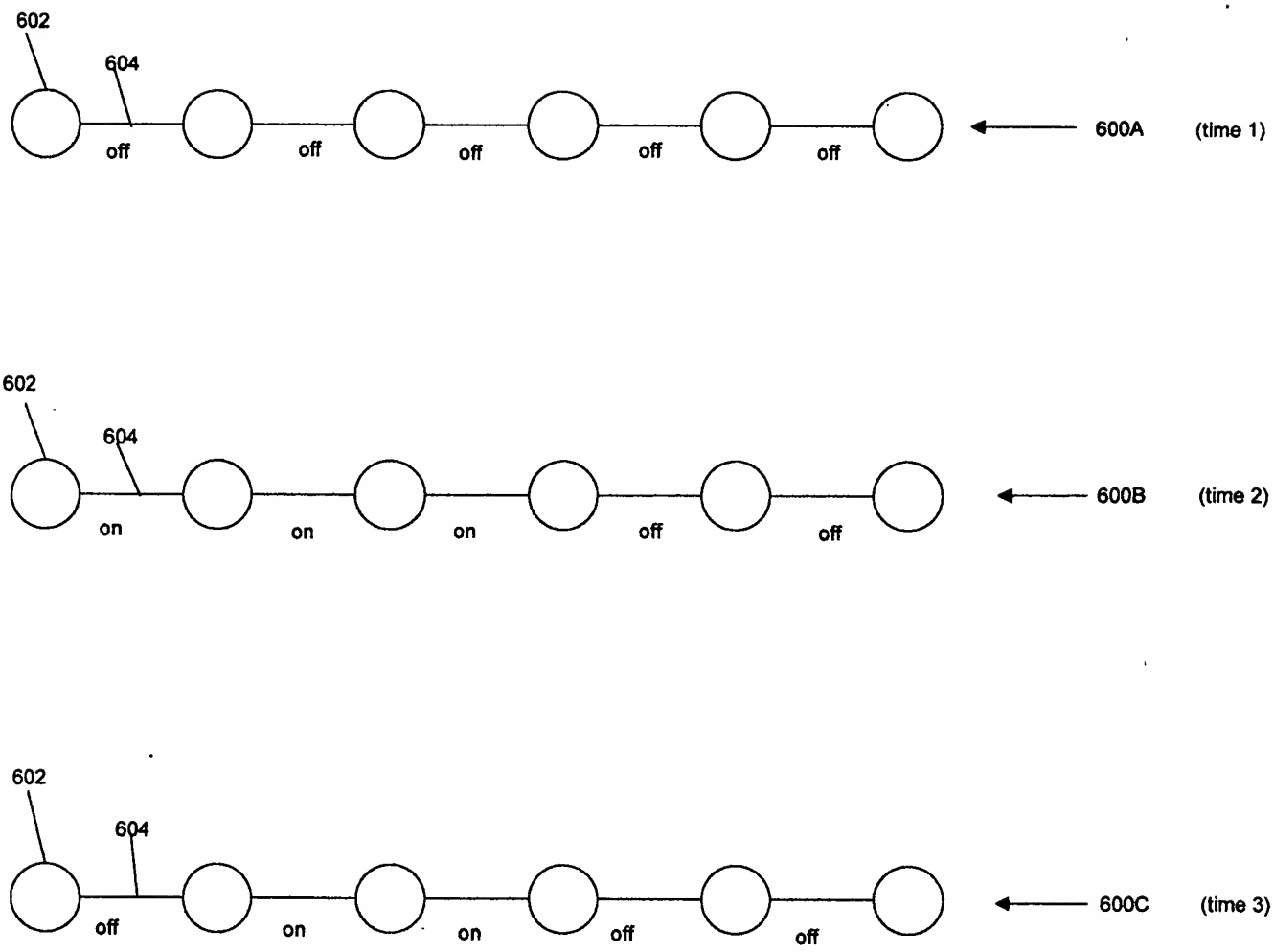

602
604
off
off
off
off
off
600A
(time 1)
602
604
on
on
on
off
off
600B
(time 2)
602
604
off
on
on
off
off
600C
(time 3)

FIGURE 6

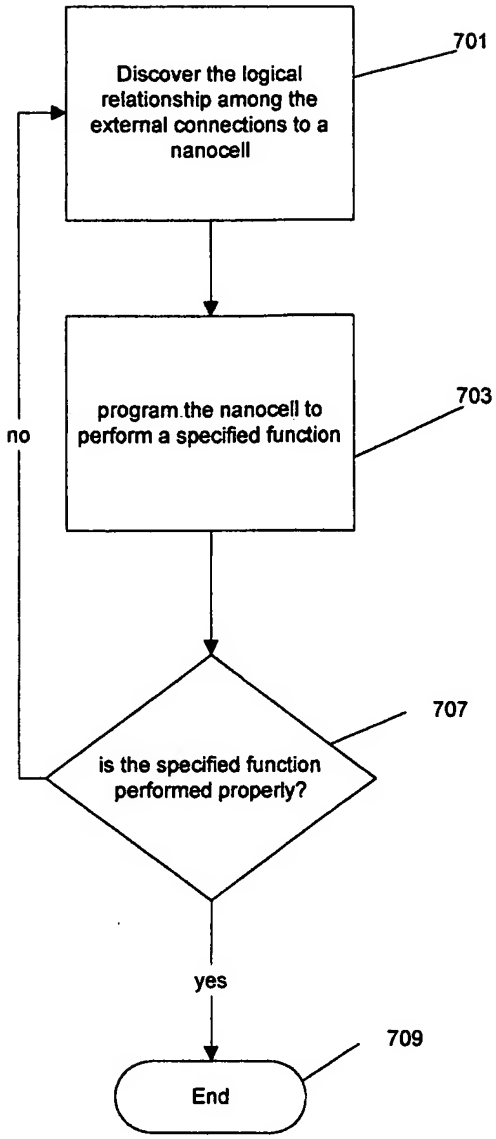

Discover the logical relationship among the external connections to a nanocell
701
program the nanocell to perform a specified function
703
no
is the specified function performed properly?
707
yes
End
709

FIGURE 7